1:Nimuendajú E-5 (1941-1942) 1952
SQ20 Tucuna SQ20

mature age. I knew of only two adult Tukuna with normal moustaches. The pubic hair is always scanty.

Signs of racial intermixture are visible in 20 per cent, more or less, of the members of the tribe—a small percentage, considering that the Tukuna have lived in peaceful contact with civilized persons for two and a half centuries. Evidently the rigid tribal organization into exogamic moieties has prevented unbridled promiscuity.

Defects and diseases.—Serious physical defects of a pathological nature are infrequent. When I inquired about the fate of children born deformed, no one could remember a particular instance. Deformation of the teeth by caries is frequent. Some cases of unilateral blindness the Indians attributed to measles.

Strangely high (2 per cent?) is the incidence of hearing defects, although I have never seen an Indian completely deaf. Defective hearing appears to be hereditary, being more frequent in certain families.

The most damaging diseases are those introduced by the Neobrazilians. Smallpox has ravaged the tribe on various occasions. The first epidemic, which decimated the Omágua in 1649, probably reached the Tukuna as well. Also highly devastating was the smallpox epidemic of 1870, which spread from returning soldiers of the Paraguayan war and almost depopulated certain *igarapés*,[1] such as the Igarapé da Rita.

Formerly there was apparently no malaria or intermittent fever (*impaludismo*) in these tributaries of the Solimões, in spite of the enormous quantities of mosquitoes. But many Tukuna who were taken by their masters to the Javary and Jandiatuba rivers died of this affliction, and others brought it back to the igarapés.

Influenza, catarrh, and other respiratory diseases are frequent but cause less damage among the Tukuna than among the other tribes.

The presence of intestinal worms among these Indians is less common than among the Neobrazilians. There are no venereal diseases, except perhaps among some emancipated families living in promiscuity with the Neobrazilians.

An endemic disease among the Tukuna, which, however, disfigures more than it incommodes, is the *purá-purá*,[2] a skin ailment that results in great irregular patches of a dark bluish color which eventually turns achromatic.

Territory

Formerly the territory of the tribe comprised the jungle centers off the left bank of the Amazon-Solimões from 71° 15′ (Ilha Peruaté) to 68° 40′ W. longitude; its tributaries, the Atacuari, Loretoyacu, Mariuaçú, Tacana, Belém, Cajary, São Jeronymo, and Rita, and the upper course of the drainage which empties into the Putumayo-Içá—the Yahuas, Cotuhé, Poreté, and Jacurapá.

The Tukuna did not then inhabit the banks of the Amazon-Solimões, for fear of the Omágua, who occupied the islands of that river throughout its course in

[1] Terms explained in the Glossary (p. 159) and native words in common use are italicized on their first appearance. Tukuna words are given in a simplified form of Nimuendajú's orthography, which is apparently a normalized phonetic transcription. The following abbreviations are used: P., Portuguese; T., Tukuna; l.g., lingua geral.

[2] *Pinta* or *mal del pinto*, caused by Spirochaeta pintae. In Brazil there are three varieties, called, according to the color of the blotches, "white," "red," and "black." Mexico, *mal del pinto*; Colombia, *carate*; Honduras, *cativi*.—Trans.

1:Nimuendajú E-5 (1941-1942) 1952
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131 Tukuna territory and even far beyond, while the banks of the Putumayo-Içá were
101 held by Aruak tribes—the Mariaté, Yumána, and Pasé. To the west they had for neighbors the Yáhua and the Péba. Today this former Tukuna territory is divided among Peru, Colombia, and Brazil.

As the Indians of all these neighboring tribes (with the exception of the Yáhua) became fewer or finally disappeared, the Tukuna began to spread out along both banks and on the islands of the Solimões, where many of them live today, as well as on the lakes and tributaries of the right bank. Similarly, they have settled near the Paraná, on the Camatía and along the lower Jandiatuba. Some of their settlements are on the lower Içá, but representatives of the tribe have appeared most recently on the Auatí-paraná, at approximately 66° 30′ W. longitude. The region of the lower Javary, where they were encountered in the past century, they have since abandoned, and likewise they have abandoned the Poreté region.

133 The entire Tukuna country is part of the Amazon basin, and in the whole region there is not—in the Brazilian part, at least—even one elevation that merits the name of *serra*, nor can any stones be found except a few gravel beds in the upper courses of the igarapés. Lakes and lacustrine topography are found only in the marginal region of the Solimões and in the lower courses of the igarapés. The jungle centers are firm ground. At some points this solid ground extends to the banks of the Solimões, where it forms enormous bluffs twenty-five meters high or more, which are very apt to crumble, especially in times of excessive runoff, and this causes the inhabitants great inconvenience.

During the summer the low riverbanks are bordered with mud beaches. In the winter they are covered with water and become lacustrine zones, with lakes and sinks in some places more than a league* in width. Few of the numerous islands offer a place of shelter from the regular floods; most of them are inundated in the winter to the point of being uninhabitable. These islands with their low banks are also subject to the effects of erosion and inundation to a prodigious degree, the topography sometimes being completely altered within a few years.

132 The climate is hot and humid, and one feels the lack of ventilation in the jungle. Annually in June and July there are sudden very marked cold spells, accompanied by strong winds from the southeast (not the southwest!) and by fine rains which last from one to three days.

133 The year is divided into a rainy winter and a dry summer. The Solimões floods regularly; beginning to rise in December it reaches its highest point (12 m. above the dry level) in March, April, and May, diminishing gradually in June and July. The months of August, September, October, and November witness the drying up of streams, so that the upper courses of the igarapés become unnavigable. However, there are frequently major departures from this pattern.

137 The virgin Amazonian jungle covers this region throughout. Only at the head-
[134] waters of the Igarapé de São Jeronymo are there elevated spots with sandy soil and low vegetation. The jungle itself is rich in vegetable products, of which only timber and rubber are now being exploited.

136 A few decades ago the region was extremely rich in game, but the rise in price of leather rapidly caused the near extermination of such mammals as the tapir

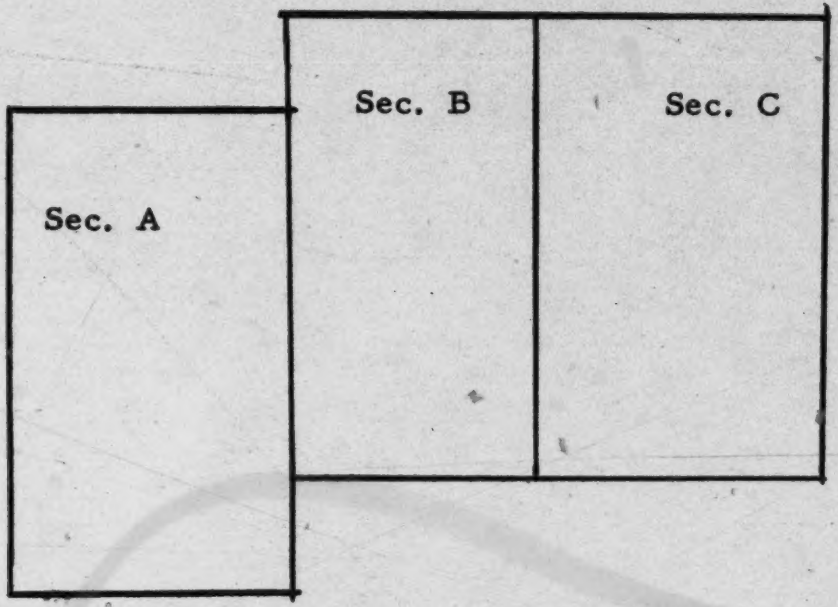
* The Portuguese league equals 6 kilometers.

[Text continues on page 8]

1:Nimuendaju
102, 131, 133, 361, 103

SQ20 Tucuna

Chart of Position of Map on Pp. 5, 6, and 7



1:Nimuendajú E-5 (1941-1942) . 1952
SQ20 Tucuna SQ20

The Solimões River

KEY TO MAP

131
133
103
361
102

Rivers and Streams

R42 ahiti'
R35 aru-pano
R37 bararí'
R47 Cabeceira do Taxy
R48 Cano do Taxy
R29 čau/matš'
R31 daurš-ki
R44 doča'nei°
R17 dyo'ina
R26 dyo'naka
R33 š/ti
R46 š/tiá-ki
R19 šwarš
R52 Igarapé Açú
R16 Ig. Agrš
R3 Ig. Berury
R15 Ig. Caldeirão
R32 Ig. Calixto
R7 Ig. Capucete
R10 Ig. Capitán
R11 Ig. Caraná
R45 Ig. da Rita
R12 Ig. Irinéu
R53 Ig. Manacá
R2 Ig. Marianná
R8 Ig. Nuáka
R43 Ig. Panapaná
R14 Ig. Piranha
R6 Ig. Preto (1)
R41 Ig. Preto (2)
R4 Ig. São Antonio
R9 Ig. São Jorge
R40 Ig. São Paulo
R13 Ig. Surubim
R51 Ig. Tauapé
R28 kuai°-ti
R38 kwalča'ta-ti
R39 Mšia-ti
R22 Mš-ti
R24 Mbši
R27 mš'kira°
R34 mš'-para
R36 na°/na'naš
R21 napa-ti
R23 pačaro'o
R49 Paraná Apára
R50 Paraná das Panellas
R1 Rio Javary
R5 Rio Tacana
R30 taučini-ki
R25 tau-i
R18 tawe'tš
R20 tino-ti

Tukuna Dwellings

T14 Augusto Mozarlo
T4 Ant° Cassemiro
T8 Calixto
T9 Cap. Antonio
T2 Cap. Felix
T13 Custodio
T11 Derš
T5 Juliño
T1 J. Tauari
T12 Nino
T10 šora'a
T3 Ponciano
T6 Surára (tapera)
T7 taivegi'no

Towns and Settlements

S11 Açacalo
S6 Aljubarata
S16 A. Ramiro
S9 Belém
S5 Capucete
S3 J. Mendes
S14 Laureano Müller
S8 Marupiára
S13 M. Geissler
S18 Mission
S4 Moysés
S10 Palmares
S15 Paraizo
S1 Ramon Castillo
S12 St° Cruz
S2 Tabatinga
S7 Tupy
S17 V° Velha

Lakes

L1 Cajary
L2 Curaná
L3 Lago das Panellas

Islands

I6 Ilha Cajary
I5 Ilha Capiahy
I7 Ilha Cariay
I4 Ilha Guaribas
I1 Ilha Sururuá
I3 Ilha Tauará
I2 Ilha Tubarões

1:Nimuendajú E-5 (1941-1942) 1952
SQ20 Tucuna SQ20

[P. 5] [Section A]

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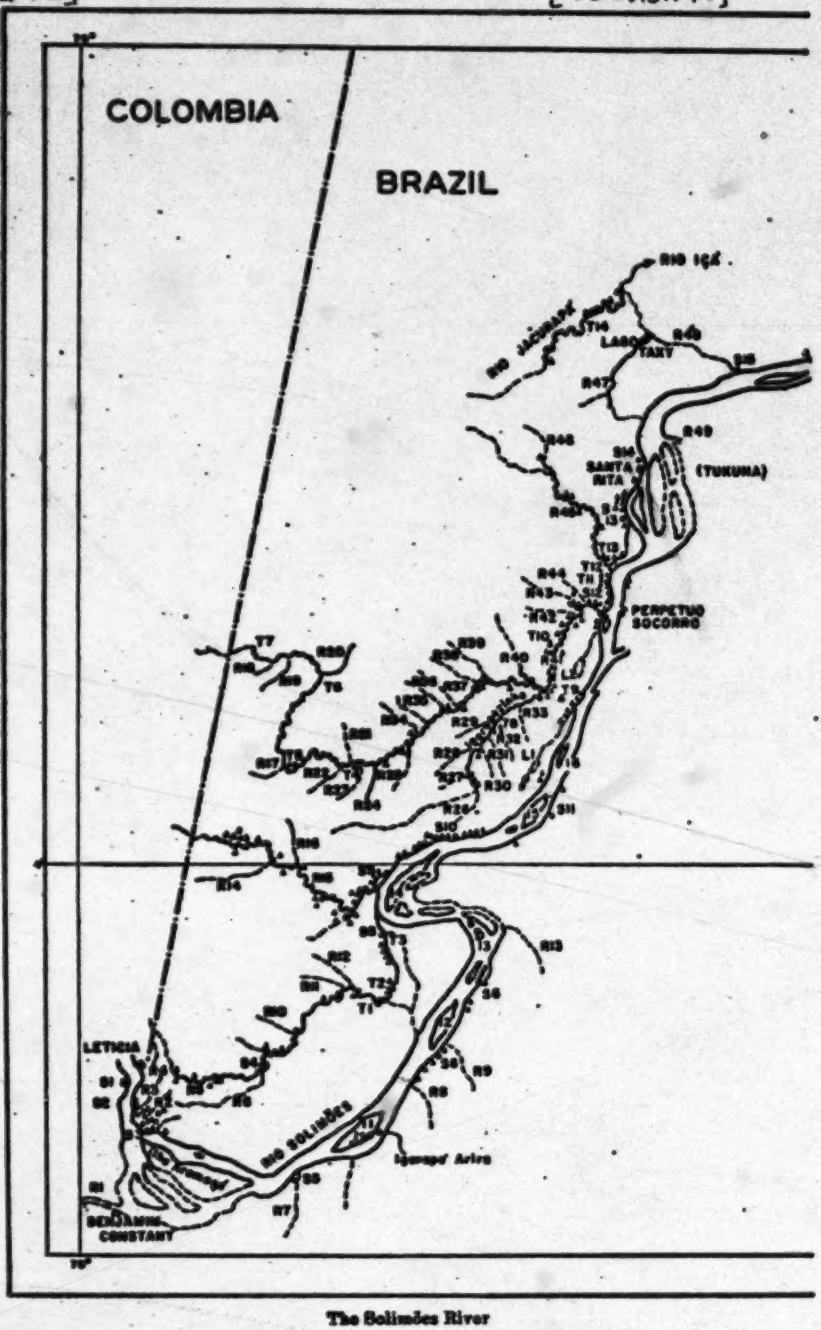
361
102



The Solimões River
(For scale and eastern section, see following pages.)

1:Nimuendajú E-5 (1941-1942) 1952
SQ20 Tucuna SQ20

131
193
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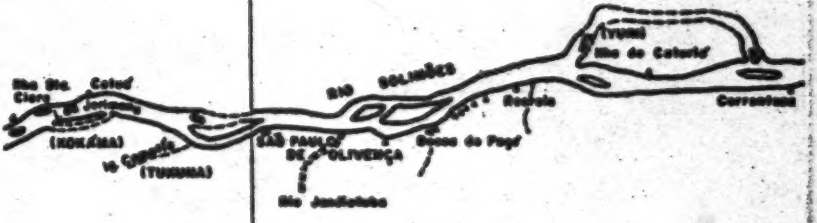
361
102

[Section B]



THE SOLIMÕES RIVER
(LETICIA TO TONANTINS)

Surveyed by
CURT NIMUENDAJÚ
1941

0 5 10 20 30 40 km.

Scale 1:40,000

▲ Tukuna dwellings
● Kokáma dwellings
■ Kayabí dwellings

[P. 6]

1:Nimuendajú E-5 (1941-1942) 1952

SQ20 Tucuna SQ20

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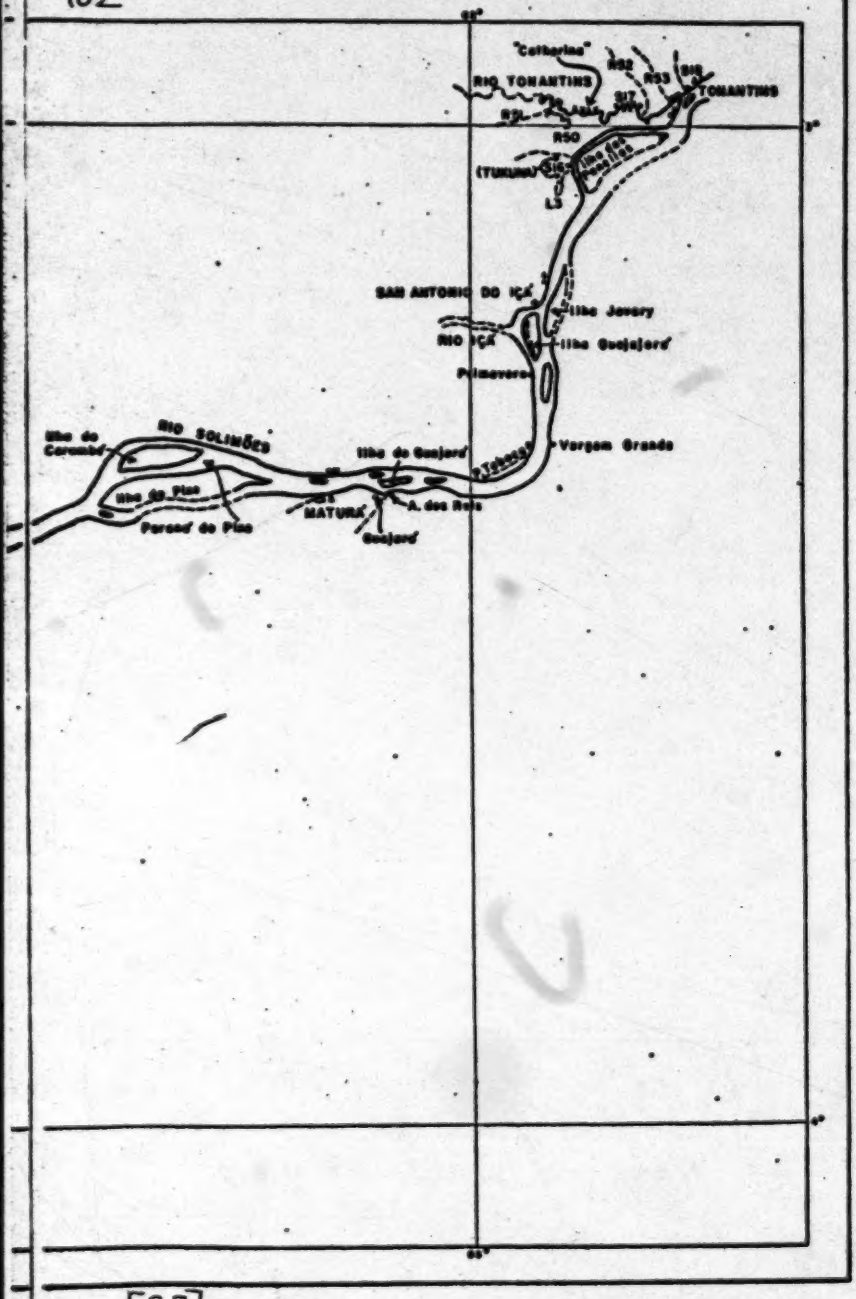
[Section C]



[P.7]

1:Nimuendajú E-5 (1941-1942) 1952
SQ20 Tucuna SQ20

Property.—The Tukuna apparently lack the concept of a rigidly delineated territorial zone as the tribal patrimony. They never protest against Neobrazilian usurpation of almost all the lands formerly at their disposal, nor do they squabble over boundaries with the Neobrazilians or with other tribes. In fact, the region is so immense and the population so scanty that difficulty over land rarely arises, as it may do when a *civilizado* forces an Indian to abandon his own plot because the land now belongs to the former or when sharpers extort "taxes" from the Indians inhabiting lands which never belonged to any civilized person.

Formerly the Tukuna were restricted to certain areas by the presence of neighboring tribes, some of them avowed enemies, like the Omágua and the Mayoruna. With the disappearance of this pressure the Tukuna began to spread out beyond their territorial limits, knowingly, but without any scruples.

A Tukuna will not quarrel with a Neobrazilian over land or over fish in the igarapé; even less will he quarrel with his tribesmen. As for land, he desires only that it be productive; it does not enter his mind to pass land on to his descendants, nor does he sell it as his own property. If his children move, they lay no claim even to the fruit trees their parents planted at the old site. Everywhere there are Tukuna taperas (abandoned, jungle-grown plantations) with numerous fruit trees. Who planted them and where the former owner is now living is well known, but once he abandons his property, anyone who so wishes may take possession.

A house is the property of the person who constructed it or ordered it built—usually the head of the family—who may abandon, sell, or give it away over the protests of other family members. The clearing belongs, not to the man who felled the trees, but to the woman who planted and weeded it, as we have seen in the discussion of divorce, though the entire family, if normally organized, benefits from its produce. In general, each person, even a child, is the owner of whatever he makes or of whatever is made for him.

Inheritance.—Objects used exclusively by men may not be inherited by women, and vice versa. When I asked an Indian, who had neither sons nor brothers, who would inherit his shotgun, he answered that it would belong to his son-in-law. If the couple should separate, he said, his daughter would keep the weapon and give it to her next husband; thus, the actual inheritor was the daughter. Normally, the legacy passes from father to son or, if there are no sons, to a brother, brothers-in-law being considered only if there are no sons or brothers. Correspondingly, daughters inherit their mother's property. I have never observed any disappointment or disagreement over inheritance, even when the objects were relatively valuable, such as firearms or a sewing machine.

Chiefs

There is absolutely no political organization today. The Tukuna never had a supreme head, and a clan government could not obtain because the clans were not localized. But what they apparently did have until not too remote times were chiefs of local groups inhabiting the various igarapés tributary to the Solimões. These heads of large families possessed magical powers, intelligence, and ability to deal with strangers, especially with the *civilizados*. Owing to these qualities, they gained a limited ascendancy over fellow members of the group who would approach them

2: Nimuendajú E-5 (1941-1942) 1948
SQ20 Tucuna SQ20

THE TUCUNA

By Curt Nimuendaju

HABITAT, HISTORY, AND LANGUAGE

The *Tucuna* (*Tukuna, Ticuna*), not to be confused with the *Tucano*, occupied the jungle tracts of the tributaries of the northern side of the Amazon-Solimões River from long. 71°15' (Peruaté Island) to 68° 40' W., and the upper course of the streams on the opposite side of the watershed of the Putumayo-Içá River (map 1, *No. 4;* map 5). They avoided the banks of the Amazon-Solimões, fearing the *Omagua*, their traditional enemies of the islands. When the latter disappeared, the *Tucuna* spread out over the islands and shores of the Solimões as far as the Auatí-Paraná River (long. 66°30' W.).

The country is flat, covered by Amazonian jungle. A wide strip bordering on the Solimões River is subject to great periodical floods.

The *Tucuna*, inconspicuous in the history of the Amazon, were first mentioned in 1641 by Cristobal d'Acuña.

Rivet (1912 b) designated the *Tucuna* language as "un dialecte arawak très corrompu." Only a part of his list of lexicological similarities appears to be valid, especially as he lacked sufficient reference material on the *Tucuna* language. There is, however, no doubt that the *Tucunan* vocabulary has a number of elements which were borrowed from the *Arawakan* languages, as noted also by Brinton (1901) and Tessmann (1930). *Tupí* influence is greater than Rivet supposed, being revealed in the pronouns, which he noted but did not evaluate. Correspondences with *Yurí* are fewer, but not unimportant. It is regrettable that there is not more phonetic material on this language. The *Tucanan* element, which Tessmann states is second in importance, is, as Rivet also noted, very weak. The *Mura* element postulated by Loukotka lacks absolute proof.

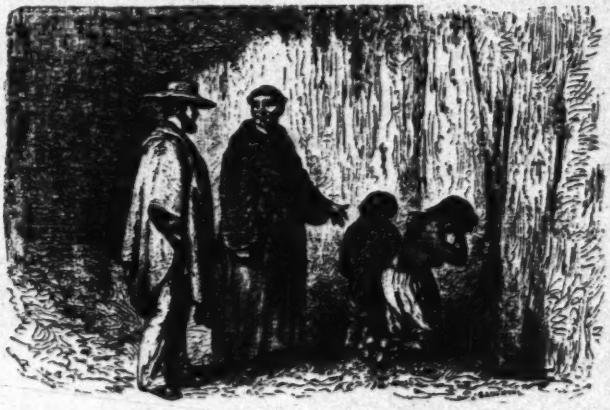
Martius called attention to 11 *Ge* elements in *Tucunan;* Rivet added five more examples. (Both Martius and Rivet include *Camacán* and *Masacarian* in the *Ge* family.) But, of Rivet's 16 *Ge* elements, only 4 are valid, 3 being formed of *Camacán* elements and only one of *Ge* elements.

There is, therefore, insufficient evidence for Brinton's, Rivet's, and Loukotka's inclusion of *Tucunan* in the *Arawakan* family. For the present, it is advisable to follow Chamberlain and Tessmann in considering it a separate language.

4: Marcoy T-5 (ca. 1865) 1875 SQ20 Tucuna SQ20

by Portuguese merchants, who are occupied with a very restricted trade in sarsaparilla, cotton goods, and salt-fish. If there is little to divert the residents there, at all events mosquitoes are very common, and the chique or *pulex penetrans* abounds; whilst the first feed on your blood, the second, like troglodytes, excavate little caverns and holes beneath the toes, where they increase and multiply, perfectly indifferent to the violent itching which you suffer from their filthy presence.

The Loreto factory, in which I lived some days, would not have furnished me much information concerning the original Loreto mission, except for the excursion I made in the company of a very young Portuguese with whom I temporarily shared the dwelling.



PENANCE IMPOSED ON TWO YOUNG GIRLS.

The égaritéa which had brought me to Loreto had left for Nauta, and it was in a sort of canoe that we ascended the river as far as the Quebrada of Atacoari, where my young man had some business to transact. It was in the interior of this gorge, whence flows a river of black water, that in 1710 the Equatorian Jesuits had founded, under the patronage of Nuestra Señora de Loreto, the first mission of this name, of which there no longer remain any traces. The grandchildren of the converts, Indians of the Ticuna race, now dwell in a state of nature on both banks of the Atacoari.

The narrow and winding entrance to the quebrada is invaded by the Amazon, whose white waters extend to the distance of a mile and a half inland. Pendant branches and vines, stretching across from one bank to the other, give the outline on the blue sky of those festoons and streamers of which the author of *Lutris* speaks. At the time we ascended, the river, which had been overflowing since the evening, had already covered the banks and their bushes. Little trees, of which the trunks had disappeared, still displayed their leafy tops, and seemed to protest against the inundation.

After a zigzag progress for an hour amid the submerged vegetation, of which our

4: Marcoy T-5 (ca. 1865) 1875 SQ20 Tucuna SQ20

canoe grazed the topmost branches, we passed suddenly from the white waters of the Amazon to the black waters of the Atacoari. Having reached the place where this river bifurcates, we took the left branch, and landed in a little creek, where a few houses were visible. Brazilian soldiers, of the kind who poniard their chiefs under pretext of tyranny, had taken refuge in this spot, and lived conjugally with Ticuna women who had escaped from some mission. These runaway warriors, who may be frequently met with on the canals and igarapés of the Amazon, where the sentence of a court-martial cannot reach them, have sometimes received us in a most hospitable manner, and caused us to wonder at the peaceful tableau presented by their home life. All cultivate a few yucca-roots and bananas, hunt and fish to supply their table, traffic with the river traders in sarsaparilla and chocolate, which they collect in the woods, and from this trifling commerce draw a little money with which to purchase cotton goods wherewith to clothe themselves, and ornaments to bedeck their wives. Exempt from all troubles and anxiety, without ambition or unsatisfied dreams of any kind, these philosophical deserters, under the ban of society, but received with open arms by nature, pass their days happily with the companions of their choice and the little, brown, and hairy marmots which Heaven has been pleased to send them.

The business which brought my young Portuguese to the dwelling of these planters was connected with an order for a load of sarsaparilla which he [illegible]ived from the Barra do Rio Negro, and which the Atacoari merchant had promised to deliver at the end of the month. The transaction being concluded to the satisfaction of the two parties, and sealed with a dram of rum taken from a common glass, we supped and slept beneath the roof of the Brazilian soldier. The next morning, instead of descending the Amazon, we continued to ascend the course of the Atacoari.

To the square houses of the soldiers soon succeeded the round huts of the Ticunas. These natives, who, as I was informed, inhabited only the banks of the principal river, dwell also, in point of fact, on the banks of the Yacanga and Yanayaquina, two tributaries of the right and left banks respectively.

The first Ticunas we came across made a very bad impression on me. We had just started on our way. It was seven o'clock, and the sun was rising: the more elevated parts of the landscape were already brilliantly illuminated; below all was enveloped in a soft fog; the birds chattered whilst pluming their wet feathers; the flowers, vivified by the freshness of the morning, commenced to exhale their various perfumes; drops of dew trickled slowly from the leaves and fell one by one into the river. Leaning against the side of the canoe, I was idly dreaming, hearing without understanding and gazing without seeing, when, from behind some brushwood which hid from us a bend in the river, issued, or rather shot out, a little canoe manned by two Ticunas, a man and a woman: the man rowed, the woman steered with the paddle; in the centre of their vessel, a mere nut-shell, there was visible a bunch of bananas and edible roots, half-covered with some large cane-leaves. The brilliant green of the fresh leaves, still glistening with dew, contrasted with the blue and vermilion of a tame ara squatting on them. As they were rowing towards us we were able to examine them at our leisure.

4: Marcoy T-5 (ca. 1865) 1875 SQ20 Tucuna SQ20

mock. On parting we gave the man some fish-hooks and the woman a pair of scissors which had been notched by long use. This liberality procured from the pair a torrent of thanks from the depths of their throats, besides a present of part of the bananas they had gathered.

We stopped successively at several Ticuna huts, where, without other payment than a trifle gracefully presented to the proprietors, we ate, drank, slept, and collected musical pipes, drums, necklaces, bracelets, coronets, pompons, crests, and other baubles representing the wealth of the country, of which a Parisian bourgeois would have envied us the possession to decorate the walls of his villa at Asnières or Pantin.

The information we obtained on our journey concerning the manners and customs of the Ticunas is limited to the subjoined details. If we do not preface them with any notice of the antecedents of these natives, it is because the thread which connects their present with their past is too slight to sustain a dissertation.

The Ticuna nation, mention of whom occurs as far back as the seventeenth century, occupied, at the time when Pedro Teixeira ascended the river, the space on the left bank comprised between the rivers Ambiacu and Atacoari. On the north its territory was bounded by the Pehua and Yahua Indians; on the east by the Yuris of the river Içá; and on the west by the Orejones of the river Napo. These territorial limits remain still the same, only the numerical strength of the Ticunas is no longer commensurate with the extent of country they formerly occupied. Subjugated, re-subjugated, and catechised in turn by the Portuguese Carmelites and the Spanish Jesuits, who based on the pretensions of their government a claim to the legitimate control of the Ticunas and disputed for possession by force of arms, these natives, already much enfeebled by the contrary influence of the two forces acting upon them during half a century, were repeatedly decimated by the small-pox, that cholera-morbus of the red-skins, which completed the work of the *de Propaganda Fide*. All that now remains of the Ticuna nation forms a population of about one hundred and fifty individuals, all of whom live on the borders of the Atacoari and its two tributaries.[1]

A very odd custom of the Ticunas is the manner in which they receive individuals of another nation than their own. Hardly has such a visitor appeared on the threshold of their hut, than all the Ticunas who may be present seize their lances and present the point at the individual, under pretence of opposing his entrance. The visitor, who is aware that this is only etiquette, thrusts aside with his hand the weapons directed against him, enters the hut and seats himself on the nearest hammock. The majority of the Ticuna huts are provided, like the Brazilian drawing-rooms in the province of Para, with three or four hammocks slung opposite one another. When each hammock is made to swing by its occupant, either to chase the mosquitoes or to cool the air, and all swing together, passing, repassing, and apparently dodging, without ever coming into collision with each other, one might imagine oneself in a lace manufactory with the interminable motion of the bobbins before one's eyes.

The master of the hut then addresses the stranger, and in the hollow ventriloquial

[1] We speak of the Ticunas who are living wild, and not of those individuals of the same nation who have settled during the last twenty-five years in several of the villages on the Amazon.

5: Bates N-5 (1848-1859) 1892
SQ20 Tucuna SQ20
Mayoruna SE16

The original territory of the Tucúna tribe embraced the banks of most of the by-streams, from 40 miles below St. Paulo to beyond Loreto in Peru, a distance of about 200 miles; the tribe, however, is not well-demarcated from that of the Collínas, who appear to be a section of Tucúnas, and whose home extends 200 miles farther to the east.

The only other tribe of this neighbourhood concerning which I obtained any information were the Majerónas, whose territory embraces several hundred miles of the western bank of the river Jauarí, an affluent of the Solimoens, 120 miles beyond St. Paulo. These are a fierce, indomitable, and hostile people, like the Aráras of the river Madeira; they are also cannibals. The navigation of the Jauarí is rendered impossible on account of the Majerónas lying in wait on its banks to intercept and murder all travellers, especially whites.

Four months before my arrival at St. Paulo, two young half-castes (nearly white) of the village went to trade on the Jauarí; the Majerónas having shown signs of abating their hostility for a year or two previously. They had not been long gone, when their canoe returned with the news that the two young fellows had been shot with arrows, roasted, and eaten by the savages. José Patricio, with his usual activity in the cause of law and order, despatched a party of armed men of the National Guard to the place to make inquiries, and, if the murder should appear to be unprovoked, to retaliate. When they reached the settlement of the horde who had eaten the two men, it was found evacuated, with the exception of one girl, who had been in the woods when the rest of her people had taken flight, and whom the guards brought with them to St. Paulo. It was gathered from her, and from other Indians on the Jauari, that the young men had brought their fate on themselves through improper conduct towards the Majeróna women. The girl, on arriving at St. Paulo, was taken care of by Senhor José Patricio, baptised under the name of Maria, and taught Portuguese. I saw a good deal of her, for my friend sent her daily to my house to fill the water jars, make the fire, and so forth. I also gained her goodwill by extracting the grub of an Œstrus fly * from her back, and thus cured her of a painful tumour. She was decidedly the best-humoured and, to all appearance, the kindest-hearted specimen of her race I had yet seen. She was tall and very stout; in colour much lighter than the ordinary Indian tint, and her ways altogether were more like those of a careless, laughing country wench, such as might be met with any day

* A species of Œstrus or gadfly, on the Upper Amazons, fixes on the flesh of man as breeding place for its grub. I extracted five at different times from my own flesh. The first was fixed in the calf of my leg, causing there a suppurating tumour, which, being unaware of the existence of this Œstrus, I thought at first was a common boil. The tumour grew and the pain increased until I became quite lame, and then, on carefully examining the supposed boil, I saw the head of a grub moving in a small hole at its apex. The extraction of the animal was a difficult operation, it being an inch in length and of increasing breadth from head to tail, besides being secured to the flesh of the inside of the tumour by two horny hooks. An old Indian of Ega showed me the most effective way of proceeding, which was to stupefy the grub with strong tobacco juice, causing it to relax its grip in the interior, and then pull it out of the narrow orifice of the tumour by main force.